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MULTICRITERIA EVALUATION METHOD IN LOCALIZATION OF TOURISM INVESTMENTS

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МЕТОД БАГАТОКРИТЕРІАЛЬНОЇ ОЦІНКИ ЛОКАЛІЗАЦІЇ ІНВЕСТИЦІЙ В ТУРИСТИЧНУ ГАЛУЗЬ

In our daily lives as well as in professional settings, there are typically multiple conflicting criteria that need to be evaluated in making decisions. This thesis is particularly truthful while one is searching the good place for an investment. The search of good place for an investment is a typical spatial problem, so the solutions should be found in area of spatial research. The proximity of town centre or roads, the slope of terrain or land use are the good examples of typical criteria. In the most cases these criteria are not sharp. We would like to be “as close as possible” to the town centre, but “not very close” of the main road. And the slope of the land ought to be between 5 and 15 degrees “or something close to it” – that is the typical set of investor expectations.

Multi-criteria evaluation (MCE) is a set of GIS methods used to allocation of land to suit a specific objective on the basis of a variety of attributes that the selected areas should possess. MCE is perhaps the most fundamental of decision support operations in geographical information systems. This paper reviews Weight Linear Combination (WLC) and Order Weighted Average (OWA) – two popular MCE approaches employed in GIS in order to support tourism investments localization.

In WLC method, criteria may include both weighted factors and constraints. The WLC procedure is characterized by full tradeoff between factors and average risk. Factor weights, not used at all in the case of Boolean intersection (no tradeoff), are very important in WLC because they determine how individual factors will tradeoff relative to each other. In this case, the higher the factor weight, the more influence that factor has on the final suitability map. Along with full tradeoff, this combination procedure is characterized by an average level of risk, as it is exactly midway between the minimization (AND operation) and maximization (OR operation) of areas to be considered suitable in the final result.

The OWA method assumes both factors and constraints as in the WLC method. However, in addition to factor weights, order weights are used. This second set of weights enables direct control over the levels of tradeoff and risk. The degree of overall tradeoff is the degree to which factor weights are applied in the combination procedure; the influence of these weights, from none to full, is governed by the set of order weights. The degree of risk is the position of the combination procedure between the minimization (AND operation) and maximization (OR operation) of areas to be considered suitable in the final result; this is also controlled by the set of order weights.

The paper comprises a theoretical part, and a case study prepared on data of Silesian voivodeship (Poland). This case study shows the practical usage of both methods and the differences between them.